

Attorney Docket No. P71376US0  
Application No. 10/586,138

**Amendments to the claims:**

This listing of claims replaces all prior versions, and listings, of claims in the application.

**Listing of claims:**

Claim 1 (original): Distance measuring device comprising an emitter and a receiver, said emitter being arranged to produce a magnetic field by means of a resonant circuit having a resonant frequency, said receiver being arranged to pick up at said resonant frequency the magnetic field emitted by the emitter and convert the strength of the magnetic field picked up into a first signal having an energy value, said emitter being arranged to produce said magnetic field intermittently, each emission having a predetermined energy, said receiver being connected to a detector arranged to determine a distance measurement signal representing the distance between the emitter and the receiver, wherein said detector is arranged to determine said distance measurement signal by correlation of said first signal with a second predetermined signal having a waveform representative of representing a signal to be picked up as obtained in the absence of perturbation by the receiver, said second signal comprising a time window having a predetermined duration and comprising at least an initial sub-period, an intermediate sub-period and a final sub-period, said second signal being an alternating signal synchronized with the first signal and whereof the amplitude is attenuated during the initial and final periods and substantially at a maximum during the intermediate period,